

B. Amendment to the Claims

Please cancel claims 1-5 without prejudice or disclaimer.

1-5. (Cancelled)

6. (Previously Presented) A metallic rotary polygonal mirror

comprising:

a metallic polygonal mirror substrate made of aluminum or an aluminum

alloy;

an intermediate layer of TiO_2 formed by vacuum deposition on the

substrate;

a metallic reflective layer of Cu formed by vacuum deposition on the

intermediate layer; and

a protective layer including at least a layer of Al_2O_3 , formed by vacuum

deposition on the metallic reflective layer.

7. (Previously Presented) The metallic rotary polygonal mirror

according to claim 6, wherein said intermediate layer has a layer thickness of from 50 nm

to 150 nm, and said metallic reflective layer has a layer thickness of from 80 nm to 150

nm.

8. (Previously Presented) The metallic rotary polygonal mirror according to claim 6, wherein said protective layer comprises a double layer consisting of a first protective layer and a second protective layer.

9. (Previously Presented) The metallic rotary polygonal mirror according to claim 8, wherein said first protective layer is a layer of Al_2O_3 , and said second protective layer is a layer of SiO_2 .

10. (Previously Presented) The metallic rotary polygonal mirror according to claim 9, wherein said first protective layer has a layer thickness of from 150 nm to 200 nm, and said second protective layer has a layer thickness of from 10 nm to 20 nm.

11. (Withdrawn) The metallic rotary polygonal mirror according to claim 6, wherein said protective layer comprises a triple layer consisting of a first protective layer, a second protective layer and a third protective layer.

12. (Withdrawn) The metallic rotary polygonal mirror according to claim 11, wherein said first protective layer is a layer of Al_2O_3 , said second protective layer is a layer of TiO_2 , and said third protective layer is a layer of SiO_2 .

13. (Withdrawn) The metallic rotary polygonal mirror according to claim 12, wherein said first protective layer has a layer thickness of from 150 nm to 200 nm, said second protective layer has a layer thickness of from 80 nm to 100 nm, and said third protective layer has a layer thickness of from 10 nm to 20 nm.

14. (Original) The metallic rotary polygonal mirror according to claim 6, which has a surface reflectance of 95% or higher.

15. (Withdrawn) A process for producing a metallic rotary polygonal mirror, comprising the steps of:

forming an intermediate layer of TiO_2 by vacuum deposition on a metallic polygonal mirror substrate metal comprised of aluminum or an aluminum alloy;

forming a high-reflectance metallic reflective layer of Cu by vacuum deposition on the intermediate layer; and

forming a protective layer including at least a layer of Al_2O_3 by vacuum deposition on the metallic reflective layer.

16. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein during the formation of said intermediate layer of TiO_2 , O_2 gas is added under a pressure of from 6.65×10^{-3} Pa to 26.6×10^{-3} Pa.

17. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein during the formation of said high-reflectance

metallic reflective layer of Cu, the metallic reflective layer is formed after the inside of a vacuum deposition chamber reaches a degree of vacuum of 2.66×10^{-3} Pa or above subsequently to the formation of said intermediate layer of TiO_2 film.

18. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein in the formation of said protective layer including at least a layer of Al_2O_3 , when the layer of Al_2O_3 is formed on said high-reflectance metallic thin film of Cu, the protective layer is formed without addition of any O_2 gas at the initial stage of film formation until the film comes to have a layer thickness of 15 to 30% of a stated layer thickness, and further thereon, after the film has been formed beyond 15 to 30% and until it comes to have the stated layer thickness, with addition of O_2 gas under a pressure of from 6.65×10^{-3} Pa to 26.6×10^{-3} Pa.

19. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein said intermediate layer is formed in a layer thickness of from 50 nm to 150 nm, and said metallic reflective layer is formed in a layer thickness of from 80 nm to 150 nm.

20. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein said protective layer is formed in a double layer consisting of a first protective layer and a second protective layer.

21. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 20, wherein said first protective layer is a layer of Al_2O_3 , and said second protective layer is a layer of SiO_2 .

22. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 21, wherein said first protective layer is formed in a layer thickness of from 150 nm to 200 nm, and said second protective layer is formed in a layer thickness of from 10 nm to 20 nm.

23. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein said protective layer is formed in a triple layer consisting of a first protective layer, a second protective layer and a third protective layer.

24. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 23, wherein said first protective layer is a layer of Al_2O_3 , said second protective layer is a layer of TiO_2 , and said third protective layer is a layer of SiO_2 .

25. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 24, wherein said first protective layer is formed in a layer thickness of from 150 nm to 200 nm, said second protective layer is formed in a layer thickness of from 80 nm to 100 nm, and said third protective layer is formed in a layer thickness of from 10 nm to 20 nm.

26. (Withdrawn) The process for producing a metallic rotary polygonal mirror according to claim 15, wherein said metallic rotary polygonal mirror has a surface reflectance of 95% or higher.